(b) if so, whether any agreement has been signed with any competent authority by NISCOM for the above purpose, recently; and

(c) if so, the contents of the agreements?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) Yes Sir. The National Institue of Science Communication (NISCOM), a constituent establishment of CSIR is the implementing agency for establishing Traditional Knowledge Digital Library (TKDL).

((b) and (c)A memorandum of understanding has been signed by Director NISCOM on behalf of NISCOM and by Joint Secretary, Department of Indian systems of Medicine & Homeopathy (ISM&H), Ministry of Health & Family Welfare, Government of India for the establishment of TKDL. NISCOM has been assigned the responsibility for implementation of the TKDL project in phased manner *inter-alia* providing infrastructure facilities, setting up of TKDL hardware & software platforms, imaging and digitising of relevant texts, web hosting of TKDL and maintaining the TKDL portal.

Science and Technology Co-operation Agreements with portugal

3659. SHRI SOLIPETA RAMACHANDRA REDDY: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether two agreements between India and Portugal have been signed recently to boost co- operation in Science and technology and Ocean Sciences;

(b) if so, the details of each agreement; and

(c) the extent to which India shall be benefited as a result of such agreements, most particularly in ocean matters?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) to (c) In pursuance of the earlier concluded Agreement on Scientific and Technological Cooperation between India and Portugal, a Programme of Cooperation (POC) in the field of Science and technology for the period 2001-2002 and a Memorandum of Understanding (MOU) in the field of Ocean science & Technology for a

duration of 5 years were signed in Lisbon. Portugal on July 3, 2001. The POC contains financial and other terms for implementation of joint research projects, exchange visits etc. The areas of cooperation identified include Computer Software and Applications; Cellular and Molecular Biology; Biotechnology and Physical and Material Sciences. The areas of cooperation in the MOU include Ocean Energy, Ocean Dynamics and Modelling, Remote Sensing for Ocean Observation, Environmental Quality, Pollution and Contamination Processes, Integrated Coastal Zone Management, Underwater Instrumentation, Remotely Operatable and Autonomous Vehicles and Systems for Underwater Exploration, Sea-bed Mining etc. Action has been initiated for having a joint workshop on Ocean Science & Technology in India during November 2001 to develop new projects and identify areas of scientific and technological work.

Alarming level of Nitrous Oxide

3660. PROF. M. SANKARALINGAM: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) Whether Government's attention has been drawn to a news appearing in the Indian Express dated the 17th November, 2000 to the effect that a study suggests that alarming levels of nitrous oxide could alter the climate; if so, what is Government's reaction in this regard;

(b) whether Government have conducted further detailed studies in this regard;

(c) if so, the details thereof; and

(d) if not the reasons therefor?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) to (c)Yes Sir. The report is based on a study conducted by the National Institute of Oceanography (NIO), Goa a constituent unit of CSIR, that suggests Arabian Sea as a strong source of nitrous oxide, one of the green house gases. The government is seeking to develop time-series of data of ambient nitrous oxide concentrations to assess the cause of these high concentrations.

(d) Does not arise.